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SEQUENCE LISTING

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Chen, Xiao-Ning

<120> ISOLATED SH3 GENES ASSOCIATED WITH MYELOPROLIFERATIVE
DISORDERS AND LEUKEMIA, AND USES THEREOF

<130> 2320-1-001PCT

<140> PCT/US99/08371

<141> 1999-04-16

<150> 60/082,007

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<170> PatentIn Ver. 2.0

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Phe Gln Ser Gly Leu Pro Gln Pro Val Leu Ala Gln Ile Trp Ala Leu
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Ala Asp Met Asn Asn Asp Gly Arg Met Asp Gln Val Glu Phe Ser Ile
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PROTEIN

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Ala Met Tyr Thr Tyr Glu Ser Ser Glu Gln Gly Asp Leu Thr Phe Gln
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Gln Gly Asp Val Ile Leu Val Thr Lys Lys Asp Gly Asp Trp Trp Thr
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Gly Thr Val Gly Asp Lys Ala Gly Val Phe Pro Ser Asn Tyr Val Arg
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Gly Lys Lys Pro Glu Ile Ala Gln Val Ile Ala Ser Tyr Thr Ala Thr
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Gly Pro Glu Gln Leu Thr Leu Ala Pro Gly Gln Leu Ile Leu Ile Arg
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Lys Lys Arg Gln Ile Gly Trp Phe Pro Ala Asn Tyr Val Lys Leu Leu
1125 1130 1135

Ser Pro Gly Thr Ser Lys Ile Thr Pro Thr Glu Pro Pro Lys Ser Thr
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1155 1160 1165

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Leu Asn Lys Glu Asp Pro Asp Trp Trp Lys Gly Glu Val Asn Gly Gln
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Pro Ser Gln Gln
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Leu Ala Gln Ile Trp Ala Leu Ala Asp Met Asn Asn Asp Gly Arg Met
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Gln Gly Tyr Gln Leu Pro Ser Ala Leu Pro Pro Val Met Lys Gln Gln
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Ser Met Pro Pro Leu Thr Ala Val Ala Pro Val Pro Met Gly Ser Ile
130 135 140

Pro Val Val Gly Met Ser Pro Thr Leu Val Ser Ser Val Pro Thr Ala
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Ala Val Pro Pro Leu Ala Asn Gly Ala Pro Pro Val Ile Gln Pro Leu
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Pro Ala Phe Ala His Pro Ala Ala Thr Leu Pro Lys Ser Ser Ser Phe
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Pro Gln Ser Ser Arg Leu Lys Tyr Arg Gln Leu Phe Asn Ser His Asp
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Lys Thr Met Ser Gly His Leu Thr Gly Pro Gln Ala Arg Thr Ile Leu
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Ser Asp Ile Asp Gln Asp Gly Lys Leu Thr Ala Glu Glu Phe Ile Leu
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Val Leu Pro Pro Glu Tyr Ile Pro Pro Ser Phe Arg Arg Val Arg Ser
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Gly Ser Gly Ile Ser Val Ile Ser Ser Thr Ser Val Asp Gln Arg Leu
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Pro Glu Glu Pro Val Leu Glu Asp Glu Gln Gln Gln Leu Glu Lys Lys
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Asn Leu Glu Leu Glu Lys Arg Arg Gln Ala Leu Leu Glu Gln Gln Arg
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PROTEIN DATA

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 420 425 430
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 Glu Arg Gln Arg Gln Leu Glu Trp Glu Arg Asn Arg Arg Gln Glu Leu
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Lys Asp Gly Asp Trp Trp Thr Gly Thr Val Gly Asp Lys Ala Gly Val
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Phe Pro Ser Asn Tyr Val Arg Leu Lys Asp Ser Glu Gly Ser Gly Thr
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Ile Ala Ser Tyr Thr Ala Thr Gly Pro Glu Gln Leu Thr Leu Ala Pro
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Ala Asn Tyr Val Lys Leu Leu Ser Pro Gly Thr Ser Lys Ile Thr Pro
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Lys Ile Thr Pro Thr Glu Pro Pro Lys Ser Thr Ala Leu Ala Ala Val
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Asp Gln Ala Arg Asn Phe Phe Phe Gln Ser Gly Leu Pro Gln Pro Val
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Leu Ala Gln Ile Trp Ala Leu Ala Asp Met Asn Asn Asp Gly Arg Met
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Asp Gln Val Glu Phe Ser Ile Ala Met Lys Leu Ile Lys Leu Lys Leu
85 90 95

Gln Gly Tyr Gln Leu Pro Ser Ala Leu Pro Pro Val Met Lys Gln Gln
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Ser Met Pro Pro Leu Thr Ala Val Ala Pro Val Pro Met Gly Ser Ile

102070-4592459

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Ser Asp Ile Asp Gln Asp Gly Lys Leu Thr Ala Glu Glu Phe Ile Leu 275 280 285		
Ala Met His Leu Ile Asp Val Ala Met Ser Gly Gln Pro Leu Pro Pro 290 295 300		
Val Leu Pro Pro Glu Tyr Ile Pro Pro Ser Phe Arg Arg Val Arg Ser 305 310 315 320		
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Leu Pro Val Thr Phe Glu Asp Lys Lys Arg Glu Asn Phe Glu Arg Gly 355 360 365		
Asn Leu Glu Leu Glu Lys Arg Arg Gln Ala Leu Leu Glu Gln Gln Arg 370 375 380		
Lys Glu Gln Glu Arg Leu Ala Gln Leu Glu Arg Ala Glu Gln Glu Arg 385 390 395 400		
Lys Glu Arg Glu Arg Gln Glu Gln Glu Arg Lys Arg Gln Leu Glu Leu 405 410 415		
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Glu Arg Arg Lys Glu Ile Glu Arg Arg Glu Ala Ala Lys Arg Glu Leu		

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Leu Asn Gln Arg Asn Lys	Glu Gln Glu Asp Ile Val Val Leu Lys Ala	
465	470	475
Lys Lys Lys Thr Leu Glu Phe	Glu Leu Glu Ala Leu Asn Asp Lys Lys	
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His Gln Leu Glu Gly Lys Leu	Gln Asp Ile Arg Cys Arg Leu Thr Thr	
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Ala Glu Ile Thr His Leu Gln	Gln Gln Leu Gln Glu Ser Gln Gln Met	
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Arg Ala Leu Glu Ala Lys Glu	Leu Ala Arg Gln His Leu Arg Asp Gln	
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Leu Asp Glu Val Glu Lys Glu	Thr Arg Ser Lys Leu Gln Glu Ile Asp	
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Ile Phe Asn Asn Gln Leu Lys	Glu Leu Arg Glu Ile His Asn Lys Gln	
610	615	620
Gln Leu Gln Lys Gln Lys Ser	Met Glu Ala Glu Arg Leu Lys Gln Lys	
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Glu Gln Glu Arg Lys Ile Ile	Glu Leu Glu Lys Gln Lys Glu Glu Ala	
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Gln Arg Arg Ala Gln Glu Arg	Asp Lys Gln Trp Leu Glu His Val Gln	
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Gln Glu Asp Glu His Gln Arg	Pro Arg Lys Leu His Glu Glu Glu Lys	
675	680	685
Leu Lys Arg Glu Glu Ser Val	Lys Lys Lys Asp Gly Glu Glu Lys Gly	
690	695	700
Lys Gln Glu Ala Gln Asp Lys	Leu Gly Arg Leu Phe His Gln His Gln	
705	710	715
Glu Pro Ala Lys Pro Ala Val	Gln Ala Pro Trp Ser Thr Ala Glu Lys	
725	730	735
Gly Pro Leu Thr Ile Ser Ala	Gln Glu Asn Val Lys Val Val Tyr Tyr	

750

Trp Thr Gly Thr Val Gly Asp Lys Ala Gly Val Phe Pro Ser Asn Tyr

[illegible]

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Ala Thr Gly Pro Glu Gln Leu Thr Leu Ala Pro Gly Gln Leu Ile Leu		
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Ile Arg Lys Lys Asn Pro Gly Gly Trp Trp Glu Gly Glu Leu Gln Ala		
1105	1110	1115
Arg Gly Lys Lys Arg Gln Ile Gly Trp Phe Pro Ala Asn Tyr Val Lys		
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Leu Leu Ser Pro Gly Thr Ser Lys Ile Thr Pro Thr Glu Pro Pro Lys		
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Ser Thr Ala Leu Ala Ala Val Cys Gln Val Ile Gly Met Tyr Asp Tyr		
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Thr Ala Gln Asn Asp Asp Glu Leu Ala Phe Asn Lys Gly Gln Ile Ile		
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Asn Val Leu Asn Lys Glu Asp Pro Asp Trp Trp Lys Gly Glu Val Asn		
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Gly Gln Val Gly Leu Phe Pro Ser Asn Tyr Val Lys Leu Thr Thr Asp		
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Leu Pro

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<213> Homo sapiens

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<210> 59

<211> 5

<212> PRT

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Pro Ile Leu Asn Lys

1

5

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<211> 2

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Phe Ser

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<210> 61

<211> 29

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His Phe Leu Thr Arg Leu Trp Asn Phe Tyr Arg Leu Ile

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Pro Ala Ala His Ser Thr Glu Asn Gly Ala Gly Gly Ala Ser Ser Thr
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<210> 66
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[The page contains faint, illegible markings or bleed-through from the reverse side.]

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<212> PRT
<213> Homo sapiens
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35 40 45

Phe Gln Ser Gly Leu Pro Gln Pro Val Leu Ala Gln Ile Trp Ala Leu
50 55 60

Ala Asp Met Asn Asn Asp Gly Arg Met Asp Gln Val Glu Phe Ser Ile

65		70		75		80
Ala Met Lys Leu Ile Lys Leu Lys Leu Gln Gly Tyr Gln Leu Pro Ser	85		90		95	
Ala Leu Pro Pro Val Met Lys Gln Gln Pro Val Ala Ile Ser Ser Ala	100		105		110	
Pro Ala Phe Gly Met Gly Gly Ile Ala Ser Met Pro Pro Leu Thr Ala	115		120		125	
Val Ala Pro Val Pro Met Gly Ser Ile Pro Val Val Gly Met Ser Pro	130		135		140	
Thr Leu Val Ser Ser Val Pro Thr Ala Ala Val Pro Pro Leu Ala Asn	145		150		155	160
Gly Ala Pro Pro Val Ile Gln Pro Leu Pro Ala Phe Ala His Pro Ala	165		170		175	
Ala Thr Leu Pro Lys Ser Ser Ser Phe Ser Arg Ser Gly Pro Gly Ser	180		185		190	
Gln Leu Asn Thr Lys Leu Gln Lys Ala Gln Ser Phe Asp Val Ala Ser	195		200		205	
Val Pro Pro Val Ala Glu Trp Ala Val Pro Gln Ser Ser Arg Leu Lys	210		215		220	
Tyr Arg Gln Leu Phe Asn Ser His Asp Lys Thr Met Ser Gly His Leu	225		230		235	240
Thr Gly Pro Gln Ala Arg Thr Ile Leu Met Gln Ser Ser Leu Pro Gln	245		250		255	
Ala Gln Leu Ala Ser Ile Trp Asn Leu Ser Asp Ile Asp Gln Asp Gly	260		265		270	
Lys Leu Thr Ala Glu Glu Phe Ile Leu Ala Met His Leu Ile Asp Val	275		280		285	
Ala Met Ser Gly Gln Pro Leu Pro Pro Val Leu Pro Pro Glu Tyr Ile	290		295		300	
Pro Pro Ser Phe Arg Arg Val Arg Ser Gly Ser Gly Ile Ser Val Ile	305		310		315	320
Ser Ser Thr Ser Val Asp Gln Arg Leu Pro Glu Glu Pro Val Leu Glu	325		330		335	
Asp Glu Gln Gln Gln Leu Glu Lys Lys Leu Pro Val Thr Phe Glu Asp	340		345		350	
Lys Lys Arg Glu Asn Phe Glu Arg Gly Asn Leu Glu Leu Glu Lys Arg	355		360		365	
Arg Gln Ala Leu Leu Glu Gln Gln Arg Lys Glu Gln Glu Arg Leu Ala						

370

375

380

Gln Leu Glu Arg Ala Glu Gln Glu Arg Lys Glu Arg Glu Arg Gln Glu
385 390 395 400

Gln Glu Arg Lys Arg Gln Leu Glu Leu Glu Lys Gln Leu Glu Lys Gln
405 410 415

Arg Glu Leu Glu Arg Gln Arg Glu Glu Glu Arg Arg Lys Glu Ile Glu
420 425 430

Arg Arg Glu Ala Ala Lys Arg Glu Leu Glu Arg Gln Arg Gln Leu Glu
435 440 445

Trp Glu Arg Asn Arg Arg Gln Glu Leu Leu Asn Gln Arg Asn Lys Glu
450 455 460

Gln Glu Asp Ile Val Val Leu Lys Ala Lys Lys Lys Thr Leu Glu Phe
465 470 475 480

Glu Leu Glu Ala Leu Asn Asp Lys Lys His Gln Leu Glu Gly Lys Leu
485 490 495

Gln Asp Ile Arg Cys Arg Leu Thr Thr Gln Arg Gln Glu Ile Glu Ser
500 505 510

Thr Asn Lys Ser Arg Glu Leu Arg Ile Ala Glu Ile Thr His Leu Gln
515 520 525

Gln Gln Leu Gln Glu Ser Gln Gln Met Leu Gly Arg Leu Ile Pro Glu
530 535 540

Lys Gln Ile Leu Asn Asp Gln Leu Lys Gln Val Gln Gln Asn Ser Leu
545 550 555 560

His Arg Asp Ser Leu Val Thr Leu Lys Arg Ala Leu Glu Ala Lys Glu
565 570 575

Leu Ala Arg Gln His Leu Arg Asp Gln Leu Asp Glu Val Glu Lys Glu
580 585 590

Thr Arg Ser Lys Leu Gln Glu Ile Asp Ile Phe Asn Asn Gln Leu Lys
595 600 605

Glu Leu Arg Glu Ile His Asn Lys Gln Gln Leu Gln Lys Gln Lys Ser
610 615 620

Met Glu Ala Glu Arg Leu Lys Gln Lys Glu Gln Glu Arg Lys Ile Ile
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Glu Leu Glu Lys Lys Lys Lys Lys
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<210> 73

<211> 33

<212> PRT

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<223> From Seq ID 73 to ID 75, there are 3 protein sequences translated from Seq ID No. 71. Together, they form the whole protein sequence.

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Arg

<213> Homo sapiens

Gly Val Asp
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<213> Homo sapiens

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Asp Gln Ala Arg Asn Phe Phe Phe Gln Ser Gly Leu Pro Gln Pro Val
50 55 60

Leu Ala Gln Ile Trp Ala Leu Ala Asp Met Asn Asn Asp Gly Arg Met
65 70 75 80

Asp Gln Val Glu Phe Ser Ile Ala Met Lys Leu Ile Lys Leu Lys Leu
85 90 95

Gln Gly Tyr Gln Leu Pro Ser Ala Leu Pro Pro Val Met Lys Gln Gln
100 105 110

Pro Val Ala Ile Ser Ser Ala Pro Ala Phe Gly Met Gly Gly Ile Ala
115 120 125

Ser Met Pro Pro Leu Thr Ala Val Ala Pro Val Pro Met Gly Ser Ile
 130 135 140
 Pro Val Val Gly Met Ser Pro Thr Leu Val Ser Ser Val Pro Thr Ala
 145 150 155 160
 Ala Val Pro Pro Leu Ala Asn Gly Ala Pro Pro Val Ile Gln Pro Leu
 165 170 175
 Pro Ala Phe Ala His Pro Ala Ala Thr Leu Pro Lys Ser Ser Ser Phe
 180 185 190
 Ser Arg Ser Gly Pro Gly Ser Gln Leu Asn Thr Lys Leu Gln Lys Ala
 195 200 205
 Gln Ser Phe Asp Val Ala Ser Val Pro Pro Val Ala Glu Trp Ala Val
 210 215 220
 Pro Gln Ser Ser Arg Leu Lys Tyr Arg Gln Leu Phe Asn Ser His Asp
 225 230 235 240
 Lys Thr Met Ser Gly His Leu Thr Gly Pro Gln Ala Arg Thr Ile Leu
 245 250 255
 Met Gln Ser Ser Leu Pro Gln Ala Gln Leu Ala Ser Ile Trp Asn Leu
 260 265 270
 Ser Asp Ile Asp Gln Asp Gly Lys Leu Thr Ala Glu Glu Phe Ile Leu
 275 280 285
 Ala Met His Leu Ile Asp Val Ala Met Ser Gly Gln Pro Leu Pro Pro
 290 295 300
 Val Leu Pro Pro Glu Tyr Ile Pro Pro Ser Phe Arg Arg Val Arg Ser
 305 310 315 320
 Gly Ser Gly Ile Ser Val Ile Ser Ser Thr Ser Val Asp Gln Arg Leu
 325 330 335
 Pro Glu Glu Pro Val Leu Glu Asp Glu Gln Gln Gln Leu Glu Lys Lys
 340 345 350
 Leu Pro Val Thr Phe Glu Asp Lys Lys Arg Glu Asn Phe Glu Arg Gly
 355 360 365
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 370 375 380
 Lys Glu Gln Glu Arg Leu Ala Gln Leu Glu Arg Ala Glu Gln Glu Arg
 385 390 395 400
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 405 410 415
 Glu Lys Gln Leu Glu Lys Gln Arg Glu Leu Glu Arg Gln Arg Glu Glu
 420 425 430

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Glu Arg Arg Lys Glu Ile Glu Arg Arg Glu Ala Ala Lys Arg Glu Leu
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Glu Arg Gln Arg Gln Leu Glu Trp Glu Arg Asn Arg Arg Gln Glu Leu
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Leu Asn Gln Arg Asn Lys Glu Gln Glu Asp Ile Val Val Leu Lys Ala
465 470 475 480

Lys Lys Lys Thr Leu Glu Phe Glu Leu Glu Ala Leu Asn Asp Lys Lys
485 490 495

His Gln Leu Glu Gly Lys Leu Gln Asp Ile Arg Cys Arg Leu Thr Thr
500 505 510

Gln Arg Gln Glu Ile Glu Ser Thr Asn Lys Ser Arg Glu Leu Arg Ile
515 520 525

Ala Glu Ile Thr His Leu Gln Gln Gln Leu Gln Glu Ser Gln Gln Met
530 535 540

Leu Gly Arg Leu Ile Pro Glu Lys Gln Ile Leu Asn Asp Gln Leu Lys
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Gln Val Gln Gln Asn Ser Leu His Arg Asp Ser Leu Val Thr Leu Lys
565 570 575

Arg Ala Leu Glu Ala Lys Glu Leu Ala Arg Gln His Leu Arg Asp Gln
580 585 590

Leu Asp Glu Val Glu Lys Glu Thr Arg Ser Lys Leu Gln Glu Ile Asp
595 600 605

Ile Phe Asn Asn Gln Leu Lys Glu Leu Arg Glu Ile His Asn Lys Gln
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<212> DNA

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 <212> PRT
 <213> Homo sapiens

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 2. *Curculionidae* (10 species)
 3. *Chrysomelidae* (10 species)
 4. *Curculionidae* (10 species)
 5. *Chrysomelidae* (10 species)
 6. *Curculionidae* (10 species)
 7. *Chrysomelidae* (10 species)
 8. *Curculionidae* (10 species)
 9. *Chrysomelidae* (10 species)
 10. *Curculionidae* (10 species)

Tyr	Tyr	Arg	Ala	Leu	Tyr	Pro	Phe	Glu	Ser	Arg	Ser	His	Asp	Glu	Ile	245	250	255
Thr	Ile	Gln	Pro	Gly	Asp	Ile	Val	Met	Val	Asp	Glu	Ser	Gln	Thr	Gly	260	265	270
Glu	Pro	Gly	Trp	Leu	Gly	Gly	Glu	Leu	Lys	Gly	Lys	Thr	Gly	Trp	Phe	275	280	285
Pro	Ala	Asn	Tyr	Ala	Glu	Lys	Ile	Pro	Glu	Asn	Glu	Val	Pro	Ala	Pro	290	295	300
Val	Lys	Pro	Val	Thr	Asp	Ser	Thr	Ser	Ala	Pro	Ala	Pro	Lys	Leu	Ala	305	310	315
Leu	Arg	Glu	Thr	Pro	Ala	Pro	Leu	Ala	Val	Thr	Ser	Ser	Glu	Pro	Ser	325	330	335
Thr	Thr	Pro	Asn	Asn	Trp	Ala	Asp	Phe	Ser	Ser	Thr	Trp	Pro	Thr	Ser	340	345	350
Thr	Asn	Glu	Lys	Pro	Glu	Thr	Asp	Asn	Trp	Asp	Ala	Trp	Ala	Ala	Gln	355	360	365
Pro	Ser	Leu	Thr	Val	Pro	Ser	Ala	Gly	Gln	Leu	Arg	Gln	Arg	Ser	Ala	370	375	380
Phe	Thr	Pro	Ala	Thr	Ala	Thr	Gly	Ser	Ser	Pro	Ser	Pro	Val	Leu	Gly	385	390	395
Gln	Gly	Glu	Lys	Val	Glu	Gly	Leu	Gln	Ala	Gln	Ala	Leu	Tyr	Pro	Trp	405	410	415
Arg	Ala	Lys	Lys	Asp	Asn	His	Leu	Asn	Phe	Asn	Lys	Asn	Asp	Val	Ile	420	425	430
Thr	Val	Leu	Glu	Gln	Gln	Asp	Met	Trp	Trp	Phe	Gly	Glu	Val	Gln	Gly	435	440	445
Gln	Lys	Gly	Trp	Phe	Pro	Lys	Ser	Tyr	Val	Lys	Leu	Ile	Ser	Gly	Pro	450	455	460
Ile	Arg	Lys	Ser	Thr	Ser	Met	Asp	Ser	Gly	Ser	Ser	Glu	Ser	Pro	Ala	465	470	475
Ser	Leu	Lys	Arg	Val	Ala	Ser	Pro	Ala	Ala	Lys	Pro	Val	Val	Ser	Gly	485	490	495
Glu	Glu	Ile	Ala	Gln	Val	Ile	Ala	Ser	Tyr	Thr	Ala	Thr	Gly	Pro	Glu	500	505	510
Gln	Leu	Thr	Leu	Ala	Pro	Gly	Gln	Leu	Ile	Leu	Ile	Arg	Lys	Lys	Asn	515	520	525
Pro	Gly	Gly	Trp	Trp	Glu	Gly	Glu	Leu	Gln	Ala	Arg	Gly	Lys	Lys	Arg	530	535	540

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they form the whole protein sequence.

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Lys Pro Ile Ser Gly Phe Ile Thr Gly Asp Gln Ala Arg Asn Phe Phe

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Ala	Leu	Pro	Pro	Val	Met	Lys	Gln	Gln	Pro	Val	Ala	Ile	Ser	Ser	Ala	
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Val	Ala	Pro	Val	Pro	Met	Gly	Ser	Ile	Pro	Val	Val	Gly	Met	Ser	Pro	
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Ser	Ser	Thr	Ser	Val	Asp	Gln	Arg	Leu	Pro	Glu	Glu	Pro	Val	Leu	Glu	
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Lys Pro Leu Met Glu Ser Glu Leu Leu Thr Glu Lys Glu Val Ala Met
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 Ile Phe Val Asn Trp Lys Glu Leu Ile Met Cys Asn Ile Lys Leu Leu
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 Lys Ala Leu Arg Val Arg Lys Lys Met Ser Gly Glu Lys Met Pro Val
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 Tyr Ile Arg Phe Cys Ser Arg Gln Leu Asn Gly Ala Ala Leu Ile Gln
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 Glu Met Asp Pro Arg Cys Lys Gly Met Pro Leu Ser Ser Phe Ile Leu
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 Lys Pro Met Gln Arg Val Thr Arg Tyr Pro Leu Ile Ile Lys Asn Ile
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 Ala Leu Glu Lys Ala Glu Glu Leu Cys Ser Gln Val Asn Glu Gly Val
 1410 1415 1420
 Arg Glu Lys Glu Asn Ser Asp Arg Leu Glu Trp Ile Gln Ala His Val
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 Gln Cys Glu Gly Leu Ser Glu Gln Leu Val Phe Asn Ser Val Thr Asn
 1445 1450 1455
 Cys Leu Gly Pro Arg Lys Phe Leu His Ser Gly Lys Leu Tyr Lys Ala
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 Lys Asn Asn Lys Glu Leu Tyr Gly Phe Leu Phe Asn Asp Phe Leu Leu
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 Leu Thr Gln Ile Thr Lys Pro Leu Gly Ser Ser Gly Thr Asp Lys Val
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 Glu Pro Ile Phe His Ile Ser His Ile Asp Arg Val Tyr Thr Leu Arg
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 Ala Glu Ser Ile Asn Glu Arg Thr Ala Trp Val Gln Lys Ile Lys Ala
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Ala Ser Glu Leu Tyr Ile Glu Thr Glu Lys Lys Lys Arg Glu Lys Ala
1570 1575 1580

Tyr Leu Val Arg Ser Gln Arg Ala Thr Gly Ile Gly Arg Leu Met Val
1585 1590 1595 1600

Asn Val Val Glu Gly Ile Glu Leu Lys Pro Cys Arg Ser His Gly Lys
1605 1610 1615

Ser Asn Pro Tyr Cys Glu Val Thr Met Gly Ser Gln Cys His Ile Thr
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Lys Thr Ile Gln Asp Thr Leu Asn Pro Lys Trp Asn Ser Asn Cys Gln
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Phe Phe Ile Arg Asp Leu Glu Gln Glu Val Leu Cys Ile Thr Val Phe
1650 1655 1660

Glu Arg Asp Gln Phe Ser Pro Asp Asp Phe Leu Gly Arg Thr Glu Ile
1665 1670 1675 1680

Arg Val Ala Asp Ile Lys Lys Asp Gln Gly Ser Lys Gly Pro Val Thr
1685 1690 1695

Lys Cys Leu Leu Leu His Glu Val Pro Thr Gly Glu Ile Val Val Arg
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Leu Asp Leu Gln Leu Phe Asp Glu Pro
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<213> Homo sapiens

<400> 106
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Lys Pro Ile Ser Gly Phe Ile Thr Gly Asp Gln Ala Arg Asn Phe Phe
35 40 45

Phe Gln Ser Gly Leu Pro Gln Pro Val Leu Ala Gln Ile Trp Ala Leu
50 55 60

Ala Asp Met Asn Asn Asp Gly Arg Met Asp Gln Val Glu Phe Ser Ile
65 70 75 80

Ala Met Lys Leu Ile Lys Leu Lys Leu Gln Gly Tyr Gln Leu Pro Ser
85 90 95

Ala Leu Pro Pro Val Met Lys Gln Gln Pro Val Ala Ile Ser Ser Ala
100 105 110

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Pro	Pro	Phe	Gly	Met	Gly	Gly	Ile	Ala	Ser	Met	Pro	Pro	Leu	Thr	Ala	
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Val	Ala	Pro	Val	Pro	Met	Gly	Ser	Ile	Pro	Val	Val	Gly	Met	Ser	Pro	
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Thr	Leu	Val	Ser	Ser	Val	Pro	Thr	Ala	Ala	Val	Pro	Pro	Leu	Ala	Asn	
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Gly	Ala	Pro	Pro	Val	Ile	Gln	Pro	Leu	Pro	Ala	Phe	Ala	His	Pro	Ala	
				165					170					175		
Ala	Thr	Leu	Pro	Lys	Ser	Ser	Ser	Phe	Ser	Arg	Ser	Gly	Pro	Gly	Ser	
			180					185					190			
Gln	Leu	Asn	Thr	Lys	Leu	Gln	Lys	Ala	Gln	Ser	Phe	Asp	Val	Ala	Ser	
		195					200					205				
Val	Pro	Pro	Val	Ala	Glu	Trp	Ala	Val	Pro	Gln	Ser	Ser	Arg	Leu	Lys	
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Tyr	Arg	Gln	Leu	Phe	Asn	Ser	His	Asp	Lys	Thr	Met	Ser	Gly	His	Leu	
225					230					235					240	
Thr	Gly	Pro	Gln	Ala	Arg	Thr	Ile	Leu	Met	Gln	Ser	Ser	Leu	Pro	Gln	
				245					250					255		
Ala	Gln	Leu	Ala	Ser	Ile	Trp	Asn	Leu	Ser	Asp	Ile	Asp	Gln	Asp	Gly	
			260					265					270			
Lys	Leu	Thr	Ala	Glu	Glu	Phe	Ile	Leu	Ala	Met	His	Leu	Ile	Asp	Val	
		275					280					285				
Ala	Met	Ser	Gly	Gln	Pro	Leu	Pro	Pro	Val	Leu	Pro	Pro	Glu	Tyr	Ile	
	290					295					300					
Pro	Pro	Ser	Phe	Arg	Arg	Val	Arg	Ser	Gly	Ser	Gly	Ile	Ser	Val	Ile	
305					310					315					320	
Ser	Ser	Thr	Ser	Val	Asp	Gln	Arg	Leu	Pro	Glu	Glu	Pro	Val	Leu	Glu	
				325					330					335		
Asp	Glu	Gln	Gln	Gln	Leu	Glu	Lys	Lys	Leu	Pro	Val	Thr	Phe	Glu	Asp	
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		355					360					365				
Arg	Gln	Ala	Leu	Leu	Glu	Gln	Gln	Arg	Lys	Glu	Gln	Glu	Arg	Leu	Ala	
		370				375						380				
Gln	Leu	Glu	Arg	Ala	Glu	Gln	Glu	Arg	Lys	Glu	Arg	Glu	Arg	Gln	Glu	
385					390					395					400	
Gln	Glu	Arg	Lys	Arg	Gln	Leu	Glu	Leu	Glu	Lys	Gln	Leu	Glu	Lys	Gln	
				405				410						415		

Arg Glu Leu Glu Arg Gln Arg Glu Glu Glu Arg Arg Lys Glu Ile Glu
 420 425 430
 Arg Arg Glu Ala Ala Lys Arg Glu Leu Glu Arg Gln Arg Gln Leu Glu
 435 440 445
 Trp Glu Arg Asn Arg Arg Gln Glu Leu Leu Asn Gln Arg Asn Lys Glu
 450 455 460
 Gln Glu Asp Ile Val Val Leu Lys Ala Lys Lys Lys Thr Leu Glu Phe
 465 470 475 480
 Glu Leu Glu Ala Leu Asn Asp Lys Lys His Gln Leu Glu Gly Lys Leu
 485 490 495
 Gln Asp Ile Arg Cys Arg Leu Thr Thr Gln Arg Gln Glu Ile Glu Ser
 500 505 510
 Thr Asn Lys Ser Arg Glu Leu Arg Ile Ala Glu Ile Thr His Leu Gln
 515 520 525
 Gln Gln Leu Gln Glu Ser Gln Gln Met Leu Gly Arg Leu Ile Pro Glu
 530 535 540
 Lys Gln Ile Leu Asn Asp Gln Leu Lys Gln Val Gln Gln Asn Ser Leu
 545 550 555 560
 His Arg Asp Ser Leu Val Thr Leu Lys Arg Ala Leu Glu Ala Lys Glu
 565 570 575
 Leu Ala Arg Gln His Leu Arg Asp Gln Leu Asp Glu Val Glu Lys Glu
 580 585 590
 Thr Arg Ser Lys Leu Gln Glu Ile Asp Ile Phe Asn Asn Gln Leu Lys
 595 600 605
 Glu Leu Arg Glu Ile His Asn Lys Gln Gln Leu Gln Lys Gln Lys Ser
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 Met Glu Ala Glu Arg Leu Lys Gln Lys Glu Gln Glu Arg Lys Ile Ile
 625 630 635 640
 Glu Leu Glu Lys Gln Lys Glu Glu Ala Gln Arg Arg Ala Gln Glu Arg
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 Asp Lys Gln Trp Leu Glu His Val Gln Gln Glu Asp Glu His Gln Arg
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 Pro Arg Lys Leu His Glu Glu Glu Lys Leu Lys Arg Glu Glu Ser Val
 675 680 685
 Lys Lys Lys Asp Gly Glu Glu Lys Gly Lys Gln Glu Ala Gln Asp Lys
 690 695 700
 Leu Gly Arg Leu Phe His Gln His Gln Glu Pro Ala Lys Pro Ala Val
 705 710 715 720

420 430 440 450 460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720

Gln Gly Asp Val Ile Leu Val Thr Lys Lys Asp Gly Asp Trp Trp Thr
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 Gly Lys Lys Pro Glu Ile Ala Gln Val Ile Ala Ser Tyr Thr Ala Thr
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 Gly Pro Glu Gln Leu Thr Leu Ala Pro Gly Gln Leu Ile Leu Ile Arg
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 Lys Lys Asn Pro Gly Gly Trp Trp Glu Gly Glu Leu Gln Ala Arg Gly
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 Lys Lys Arg Gln Ile Gly Trp Phe Pro Ala Asn Tyr Val Lys Leu Leu
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 Asn Pro Gly Thr Ser Lys Ile Thr Pro Thr Glu Pro Pro Lys Ser Thr
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 Gln Asn Asp Asp Glu Leu Ala Phe Asn Lys Gly Gln Ile Ile Asn Val
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 Leu Gln Ser Gly Leu Pro Gln Pro Val Leu Ala Gln Ile Trp Ala Leu

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Ala	Asp	Met	Asn	Asn	Asp	Gly	Arg	Met	Asp	Gln	Leu	Glu	Phe	Ser	Ile
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Ala	Met	Lys	Leu	Ile	Lys	Leu	Lys	Leu	Gln	Gly	Tyr	Pro	Leu	Pro	Ser
			85						90					95	
Ile	Leu	Pro	Ser	Asn	Met	Leu	Lys	Gln	Pro	Val	Ala	Met	Pro	Ala	Ala
			100					105					110		
Ala	Val	Ala	Gly	Phe	Gly	Met	Ser	Gly	Ile	Val	Gly	Ile	Pro	Pro	Leu
		115					120					125			
Ala	Ala	Val	Ala	Pro	Val	Pro	Met	Pro	Ser	Ile	Pro	Val	Val	Gly	Met
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Ser	Pro	Pro	Leu	Val	Ser	Ser	Val	Pro	Thr	Val	Pro	Pro	Leu	Ser	Asn
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Gly	Ala	Pro	Ala	Val	Ile	Gln	Ser	His	Pro	Ala	Phe	Ala	His	Ser	Ala
				165					170					175	
Thr	Leu	Pro	Lys	Ser	Ser	Ser	Phe	Gly	Arg	Ser	Val	Ala	Gly	Ser	Gln
			180					185					190		
Ile	Asn	Thr	Lys	Leu	Gln	Lys	Ala	Gln	Ser	Phe	Asp	Val	Pro	Ala	Pro
		195					200					205			
Pro	Leu	Val	Val	Glu	Trp	Ala	Val	Pro	Ser	Ser	Ser	Arg	Leu	Lys	Tyr
	210					215					220				
Arg	Gln	Leu	Phe	Asn	Ser	Gln	Asp	Lys	Thr	Met	Ser	Gly	Asn	Leu	Thr
225					230					235					240
Gly	Pro	Gln	Ala	Arg	Thr	Ile	Leu	Met	Gln	Ser	Ser	Leu	Pro	Gln	Ser
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Gln	Leu	Ala	Thr	Ile	Trp	Asn	Leu	Ser	Asp	Ile	Asp	Gln	Asp	Gly	Lys
			260					265					270		
Leu	Thr	Ala	Glu	Glu	Phe	Ile	Leu	Ala	Met	His	Leu	Ile	Asp	Val	Ala
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Met	Ser	Gly	Gln	Pro	Leu	Pro	Pro	Ile	Leu	Pro	Pro	Glu	Tyr	Ile	Pro
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Pro	Ser	Phe	Arg	Arg	Val	Arg	Ser	Gly	Ser	Gly	Leu	Ser	Ile	Met	Ser
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Ser	Val	Ser	Val	Asp	Gln	Arg	Leu	Pro	Glu	Glu	Pro	Glu	Glu	Glu	Glu
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Pro	Gln	Asn	Ala	Asp	Lys	Lys	Leu	Pro	Val	Thr	Phe	Glu	Asp	Lys	Lys
			340					345					350		
Arg	Glu	Asn	Phe	Glu	Arg	Gly	Asn	Leu	Glu	Leu	Glu	Lys	Arg	Arg	Gln

355

360

365

Ala Leu Leu Glu Gln Gln Arg Lys Glu Gln Glu Arg Leu Ala Gln Leu
370 375 380

Glu Arg Ala Glu Gln Glu Arg Lys Glu Arg Glu Arg Gln Asp Gln Glu
385 390 395 400

Arg Lys Arg Gln Gln Asp Leu Glu Lys Gln Leu Glu Lys Gln Arg Glu
405 410 415

Leu Glu Arg Gln Arg Glu Glu Glu Arg Arg Lys Glu Ile Glu Arg Arg
420 425 430

Glu Ala Ala Lys Arg Glu Leu Glu Arg Gln Arg Gln Leu Glu Trp Glu
435 440 445

Arg Asn Arg Arg Gln Glu Leu Leu Asn Gln Arg Asn Arg Glu Gln Glu
450 455 460

Asp Ile Val Val Leu Lys Ala Lys Lys Lys Thr Leu Glu Phe Glu Leu
465 470 475 480

Glu Ala Leu Asn Asp Lys Lys His Gln Leu Glu Gly Lys Leu Gln Asp
485 490 495

Ile Arg Cys Arg Leu Thr Thr Gln Arg His Glu Ile Glu Ser Thr Asn
500 505 510

Lys Ser Arg Glu Leu Arg Ile Ala Glu Ile Thr His Leu Gln Gln Gln
515 520 525

Leu Gln Glu Ser Gln Gln Leu Leu Gly Lys Met Ile Pro Glu Lys Gln
530 535 540

Ser Leu Ile Asp Gln Leu Lys Gln Val Gln Gln Asn Ser Leu His Arg
545 550 555 560

Asp Ser Leu Leu Thr Leu Lys Arg Ala Leu Glu Thr Lys Glu Ile Gly
565 570 575

Arg Gln Gln Leu Arg Asp Gln Leu Asp Glu Val Glu Lys Glu Thr Arg
580 585 590

Ala Lys Leu Gln Glu Ile Asp Val Phe Asn Asn Gln Leu Lys Glu Leu
595 600 605

Arg Glu Leu Tyr Asn Lys Gln Gln Phe Gln Lys Gln Gln Asp Phe Glu
610 615 620

Thr Glu Lys Ile Lys Gln Lys Glu Leu Glu Arg Lys Thr Ser Glu Leu
625 630 635 640

Asp Lys Leu Lys Glu Glu Asp Lys Arg Arg Met Leu Glu Gln Asp Lys
645 650 655

Leu Trp Gln Asp Arg Val Lys Gln Glu Glu Glu Arg Tyr Lys Phe Gln

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660	665	670
Asp Glu Glu Lys Glu Lys Arg Glu Glu Ser Val Gln Lys Cys Glu Val		
675	680	685
Glu Lys Lys Pro Glu Ile Gln Glu Lys Pro Asn Lys Pro Phe His Gln		
690	695	700
Pro Pro Glu Pro Gly Lys Leu Gly Gly Gln Ile Pro Trp Met Asn Thr		
705	710	715
Glu Lys Ala Pro Leu Thr Ile Asn Gln Gly Asp Val Lys Val Val Tyr		
725	730	735
Tyr Arg Ala Leu Tyr Pro Phe Asp Ala Arg Ser His Asp Glu Ile Thr		
740	745	750
Ile Glu Pro Gly Asp Ile Ile Met Val Asp Glu Ser Gln Thr Gly Glu		
755	760	765
Pro Gly Trp Leu Gly Gly Glu Leu Lys Gly Lys Thr Gly Trp Phe Pro		
770	775	780
Ala Asn Tyr Ala Glu Arg Met Pro Glu Ser Glu Phe Pro Ser Thr Thr		
785	790	795
Lys Pro Ala Ala Glu Thr Thr Ala Lys Pro Thr Val His Val Ala Pro		
805	810	815
Ser Pro Val Ala Pro Ala Ala Phe Thr Asn Thr Ser Thr Asn Ser Asn		
820	825	830
Asn Trp Ala Asp Phe Ser Ser Thr Trp Pro Thr Asn Asn Thr Asp Lys		
835	840	845
Val Glu Ser Asp Asn Trp Asp Thr Trp Ala Ala Gln Pro Ser Leu Thr		
850	855	860
Val Pro Ser Ala Gly Gln His Arg Gln Arg Ser Ala Phe Thr Pro Ala		
865	870	875
Thr Val Thr Gly Ser Ser Pro Ser Pro Val Leu Gly Gln Gly Glu Lys		
885	890	895
Val Glu Gly Leu Gln Ala Gln Ala Leu Tyr Pro Trp Arg Ala Lys Lys		
900	905	910
Asp Asn His Leu Asn Phe Asn Lys Asn Asp Val Ile Thr Val Leu Glu		
915	920	925
Gln Gln Asp Met Trp Trp Phe Gly Glu Val Gln Gly Gln Lys Gly Trp		
930	935	940
Phe Pro Lys Ser Tyr Val Lys Leu Ile Ser Gly Pro Leu Arg Lys Ser		
945	950	955
Thr Ser Ile Asp Ser Thr Ser Ser Glu Ser Pro Ala Ser Leu Lys Arg		

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970

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Val Ser Ser Pro Ala Phe Lys Pro Ala Ile Gln Gly Glu Glu Tyr Ile
980 985 990

Ser Met Tyr Thr Tyr Glu Ser Asn Glu Gln Gly Asp Leu Thr Phe Gln
995 1000 1005

Gln Gly Asp Leu Ile Val Val Ile Lys Lys Asp Gly Asp Trp Trp Thr
1010 1015 1020

Gly Thr Val Gly Glu Lys Thr Gly Val Phe Pro Ser Asn Tyr Val Arg
1025 1030 1035 1040

Pro Lys Asp Ser Glu Ala Ala Gly Ser Gly Gly Lys Thr Gly Ser Leu
1045 1050 1055

Gly Lys Lys Pro Glu Ile Ala Gln Val Ile Ala Ser Tyr Ala Ala Thr
1060 1065 1070

Ala Pro Glu Gln Leu Thr Leu Ala Pro Gly Gln Leu Ile Leu Ile Arg
1075 1080 1085

Lys Lys Asn Pro Gly Gly Trp Trp Glu Gly Glu Leu Gln Ala Arg Gly
1090 1095 1100

Lys Lys Arg Gln Ile Gly Trp Phe Pro Ala Asn Tyr Val Lys Leu Leu
1105 1110 1115 1120

Ser Pro Gly Thr Asn Lys Ser Thr Pro Thr Glu Pro Pro Lys Pro Thr
1125 1130 1135

Ser Leu Pro Pro Thr Cys Gln Val Ile Gly Met Tyr Asp Tyr Ile Ala
1140 1145 1150

Gln Asn Asp Asp Glu Leu Ala Phe Ser Lys Gly Gln Val Ile Asn Val
1155 1160 1165

Leu Asn Lys Glu Asp Pro Asp Trp Trp Lys Gly Glu Leu Asn Gly His
1170 1175 1180

Val Gly Leu Phe Pro Ser Asn Tyr Val Lys Leu Thr Thr Asp Met Asp
1185 1190 1195 1200

Pro Ser Gln Gln Phe Arg Leu Gly Val Lys Pro Ala Gly Gly Ile Pro
1205 1210 1215

Ala Thr Gly Asp Arg Pro Phe Ile Leu Phe Pro Phe Arg Asp Gly Pro
1220 1225 1230

Ser Leu Leu Pro Asn Ala Phe Gln Ala Pro Pro Leu Ser Val Val Met
1235 1240 1245

Ile Lys Phe Arg Cys Phe Thr Ala Pro Arg Phe Cys Pro Asp Met Asn
1250 1255 1260

Val Lys Tyr Ile Asn Ile

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1265

1270

<210> 108

<211> 1094

<212> PRT

<213> Drosophila sp.

<400> 108

Met Asn Ser Ala Val Asp Ala Trp Ala Val Thr Pro Arg Glu Arg Leu
 1 5 10 15

Lys Tyr Gln Glu Gln Phe Arg Ala Leu Gln Pro Gln Ala Gly Phe Val
 20 25 30

Thr Gly Ala Gln Ala Lys Gly Phe Phe Leu Gln Ser Gln Leu Pro Pro
 35 40 45

Leu Ile Leu Gly Gln Ile Trp Ala Leu Ala Asp Thr Asp Ser Asp Gly
 50 55 60

Lys Met Asn Ile Asn Glu Phe Ser Ile Ala Cys Lys Leu Ile Asn Leu
 65 70 75 80

Lys Leu Arg Gly Met Asp Val Pro Lys Val Leu Pro Pro Ser Leu Leu
 85 90 95

Ser Ser Leu Thr Gly Asp Val Pro Ser Met Thr Pro Arg Gly Ser Thr
 100 105 110

Ser Ser Leu Ser Pro Leu Asp Pro Leu Lys Gly Ile Val Pro Ala Val
 115 120 125

Ala Pro Val Val Pro Val Val Ala Pro Pro Val Ala Val Ala Thr Val
 130 135 140

Ile Ser Pro Pro Gly Val Ser Val Pro Ser Gly Pro Thr Pro Pro Thr
 145 150 155 160

Ser Asn Pro Pro Ser Arg His Thr Ser Ile Ser Glu Arg Ala Pro Ser
 165 170 175

Ile Glu Ser Val Asn Gln Gly Glu Trp Ala Val Gln Ala Ala Gln Lys
 180 185 190

Arg Lys Tyr Thr Gln Val Phe Asn Ala Asn Asp Arg Thr Arg Ser Gly
 195 200 205

Tyr Leu Thr Gly Ser Gln Ala Arg Gly Val Leu Val Gln Ser Lys Leu
 210 215 220

Pro Gln Val Thr Leu Ala Gln Ile Trp Thr Leu Ser Asp Ile Asp Gly
 225 230 235 240

Asp Gly Arg Leu Asn Cys Asp Glu Phe Ile Leu Ala Met Phe Leu Cys
 245 250 255

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Glu	Lys	Ala	Met	Ala	Gly	Glu	Lys	Ile	Pro	Val	Thr	Leu	Pro	Gln	Glu	
			260					265					270			
Trp	Val	Pro	Pro	Asn	Leu	Arg	Lys	Ile	Lys	Ser	Arg	Pro	Gly	Ser	Val	
		275					280					285				
Ser	Gly	Val	Val	Ser	Arg	Pro	Gly	Ser	Gln	Pro	Ala	Ser	Arg	His	Ala	
	290					295					300					
Ser	Val	Ser	Ser	Gln	Ser	Gly	Val	Gly	Val	Val	Asp	Ala	Asp	Pro	Thr	
305					310					315					320	
Ala	Gly	Leu	Pro	Gly	Gln	Thr	Ser	Phe	Glu	Asp	Lys	Arg	Lys	Glu	Asn	
				325					330					335		
Tyr	Val	Lys	Gly	Gln	Ala	Glu	Leu	Asp	Arg	Arg	Arg	Lys	Ile	Met	Glu	
			340					345					350			
Asp	Gln	Gln	Arg	Lys	Glu	Arg	Glu	Glu	Arg	Glu	Arg	Lys	Glu	Arg	Glu	
		355					360					365				
Glu	Ala	Asp	Lys	Arg	Glu	Lys	Ala	Arg	Leu	Glu	Ala	Glu	Arg	Lys	Gln	
	370					375					380					
Gln	Glu	Glu	Leu	Glu	Arg	Gln	Leu	Gln	Arg	Gln	Arg	Glu	Ile	Glu	Met	
385					390					395					400	
Glu	Lys	Glu	Glu	Gln	Arg	Lys	Arg	Glu	Leu	Glu	Ala	Lys	Glu	Ala	Ala	
				405					410					415		
Arg	Lys	Glu	Leu	Glu	Lys	Gln	Arg	Gln	Gln	Glu	Trp	Glu	Gln	Ala	Arg	
			420					425					430			
Ile	Ala	Glu	Met	Asn	Ala	Gln	Lys	Glu	Arg	Glu	Gln	Glu	Arg	Val	Leu	
		435					440					445				
Lys	Gln	Lys	Ala	His	Asn	Thr	Gln	Leu	Asn	Val	Glu	Leu	Ser	Thr	Leu	
	450					455					460					
Asn	Glu	Lys	Ile	Lys	Glu	Leu	Ser	Gln	Arg	Ile	Cys	Asp	Thr	Arg	Ala	
465					470					475					480	
Gly	Val	Thr	Asn	Val	Lys	Thr	Val	Ile	Asp	Gly	Met	Arg	Thr	Gln	Arg	
			485						490					495		
Asp	Thr	Ser	Met	Ser	Glu	Met	Ser	Gln	Leu	Lys	Ala	Arg	Ile	Lys	Glu	
			500					505					510			
Gln	Asn	Ala	Lys	Leu	Leu	Gln	Leu	Thr	Gln	Glu	Arg	Ala	Lys	Trp	Glu	
		515					520					525				
Ala	Lys	Ser	Lys	Ala	Ser	Gly	Ala	Ala	Leu	Gly	Gly	Glu	Asn	Ala	Gln	
	530					535					540					
Gln	Glu	Gln	Leu	Asn	Ala	Ala	Phe	Ala	His	Lys	Gln	Leu	Ile	Ile	Asn	
545					550					555					560	

FEEDBACK

Gln	Ile	Lys	Asp	Lys	Val	Glu	Asn	Ile	Ser	Lys	Glu	Ile	Glu	Ser	Lys	
				565					570					575		
Lys	Glu	Asp	Ile	Asn	Thr	Asn	Asp	Val	Gln	Met	Ser	Glu	Leu	Lys	Ala	
			580					585					590			
Glu	Leu	Ser	Ala	Leu	Ile	Thr	Lys	Cys	Glu	Asp	Leu	Tyr	Lys	Glu	Tyr	
		595					600					605				
Asp	Val	Gln	Arg	Thr	Ser	Val	Leu	Glu	Leu	Lys	Tyr	Asn	Arg	Lys	Asn	
	610					615					620					
Glu	Thr	Ser	Val	Ser	Ser	Ala	Trp	Asp	Thr	Gly	Ser	Ser	Ser	Ala	Trp	
625					630					635					640	
Glu	Glu	Thr	Gly	Thr	Thr	Val	Thr	Asp	Pro	Tyr	Ala	Val	Ala	Ser	Asn	
				645					650					655		
Asp	Ile	Ser	Ala	Leu	Ala	Ala	Pro	Ala	Val	Asp	Leu	Gly	Gly	Pro	Ala	
			660					665					670			
Pro	Glu	Gly	Phe	Val	Lys	Tyr	Gln	Ala	Val	Tyr	Glu	Phe	Asn	Ala	Arg	
		675					680					685				
Asn	Ala	Glu	Glu	Ile	Thr	Phe	Val	Pro	Gly	Asp	Ile	Ile	Leu	Val	Pro	
	690					695					700					
Leu	Glu	Gln	Asn	Ala	Glu	Pro	Gly	Trp	Leu	Ala	Gly	Glu	Ile	Asn	Gly	
705					710					715					720	
His	Thr	Gly	Trp	Phe	Pro	Glu	Ser	Tyr	Val	Glu	Lys	Leu	Glu	Val	Gly	
				725					730					735		
Glu	Val	Ala	Pro	Val	Ala	Ala	Val	Glu	Ala	Pro	Val	Asp	Ala	Gln	Val	
			740					745					750			
Ala	Asp	Thr	Tyr	Asn	Asp	Asn	Ile	Asn	Thr	Ser	Ser	Ile	Pro	Ala	Ala	
		755					760					765				
Ser	Ala	Asp	Leu	Thr	Ala	Ala	Gly	Asp	Val	Glu	Tyr	Tyr	Ile	Ala	Ala	
	770					775					780					
Tyr	Pro	Tyr	Glu	Ser	Ala	Glu	Glu	Gly	Asp	Leu	Ser	Phe	Ser	Ala	Gly	
785					790					795					800	
Glu	Met	Val	Met	Val	Ile	Lys	Lys	Glu	Gly	Glu	Trp	Trp	Thr	Gly	Thr	
				805					810					815		
Ile	Gly	Ser	Arg	Thr	Gly	Met	Phe	Pro	Ser	Asn	Tyr	Val	Gln	Lys	Ala	
			820					825					830			
Asp	Val	Gly	Thr	Ala	Ser	Thr	Ala	Ala	Ala	Glu	Pro	Val	Glu	Ser	Leu	
		835					840					845				
Asp	Gln	Glu	Thr	Thr	Leu	Asn	Gly	Asn	Ala	Ala	Tyr	Thr	Ala	Ala	Pro	
	850					855					860					

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[illegible]

Val Lys Leu Ile Ser Gly Pro Ile Arg Lys Ser Thr Ser Met Asp Ser
340 345 350

Gly Ser Ser Glu Ser Pro Ala Ser Leu Lys Arg Val Ala Ser Pro Ala
355 360 365

Ala Lys Pro Val Val Ser Gly Glu Glu Ile Ala Gln Val Ile Ala Ser
370 375 380

Tyr Thr Ala Thr Gly Pro Glu Gln Leu Thr Leu Ala Pro Gly Gln Leu
385 390 395 400

Ile Leu Ile Arg Lys Lys Asn Pro Gly Gly Trp Trp Glu Gly Glu Leu
405 410 415

Gln Ala Arg Gly Lys Lys Arg Gln Ile Gly Trp Phe Pro Ala Asn Tyr
420 425 430

Val Lys Leu Leu Ser Pro Gly Thr Ser Lys Ile Thr Pro Thr Glu Pro
435 440 445

Pro Lys Ser Thr Ala Leu Ala Ala Val Cys Gln Val Ile Gly Met Tyr
450 455 460

Asp Tyr Thr Ala Gln Asn Asp Asp Glu Leu Ala Phe Asn Lys Gly Gln
465 470 475 480

Ile Ile Asn Val Leu Asn Lys Glu Asp Pro Asp Trp Trp Lys Gly Glu
485 490 495

Val Asn Gly Gln Val Gly Leu Phe Pro Ser Asn Tyr Val Lys Leu Thr
500 505 510

Thr Asp Met Asp Pro Ser Gln Gln
515 520

FEEDBACK